SUBSIDENCE CONTROL AND MONITORING PLAN

SUBSIDENCE

Subsidence can normally be expected to occur over areas where second mining has taken place (pillaring). See R645-301-523 for mining operation. Based on the geologic interruptions within a mine, subsidence becomes very difficult to predict, due to the variable nature of the mining panels. However, Figure 5G-1 will give an estimate of the maximum subsidence that may be expected in mine studied in the Western U.S. Maximum subsidence for an average panel in the Bear Canyon Mine has been estimated from Figure 5C-1, using the criteria shown in Table 5C-1. Subsidence has been estimated based on the number of seams mined in the area.

Past experience in this area shows no indication that subsidence would be this drastic. No actual subsidence has been noted from areas pillared as much as 40 years ago, and the subsidence monitoring network initiated in 1987, has shown only minor (0.47 ft max 1992) variations in elevation. Based on this, little, if any, detectable subsidence is expected to become apparent when mining under these depths. Some minor fracturing and an escarpment rock fall have been noted in the adjacent Trail Canyon Mine area, and although these are assumed to be mine-related, they occurred in areas of relatively low cover and unknown outcrop protection. Only minor fracturing has been noted in relation to the Bear Canyon Mine (see Plate 5-3).